

In re Patent Application of:
ENRIQUEZ ET AL
Serial No. 10/090,291
Filed: March 4, 2002

REMARKS

The courtesies extended by Examiner Briney during the discussions with applicants' attorney on Monday, October 25, 2004, are gratefully appreciated.

As was pointed out by the undersigned during these discussions, by the foregoing amendments, applicants have endeavored to expedite prosecution towards allowance by canceling Claims 1-14 and focusing upon the invention defined in Claim 15 and Claims 16-20 dependent thereon.

In particular, applicants have amended Claim 15 to more particularly define the characteristics and operation of the voltage regulator in the last paragraph of the claim.

Specifically, applicants have amended Claim 15 to specify that the voltage regulator is coupled to the first current flow path and is operative to regulate the voltage at the first polarity input of the tip/ring amplifier to a prescribed value of regulated voltage Vreg, such that for the DC input voltage having a voltage value less than said prescribed value of regulated voltage Vreg, the voltage at the first polarity input has said voltage value less than said prescribed value of regulated voltage Vreg, and such that for said DC input voltage having a voltage value at or above said prescribed value of regulated voltage Vreg, the voltage at said first polarity input is limited to said prescribed value of regulated voltage Vreg. Support for this amendment is found, for example, in paragraph [0006] on page 4 of the specification and in paragraphs [00014] and [00015] on page 7 of the specification.

For purposes of providing a non-limiting illustration,

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attention may be directed to Figure 2 of the drawings of the present application which shows a voltage regulator 50 connected between the battery terminal and node 24, as described in lines 9-12 of paragraph [00014] of the specification.

Paragraph [00015] specifies that the parameters of the voltage regulator are such as to limit its output voltage to 56.5 VDC. Thus, a battery voltage VBAT having any value less than 56.5 VDC would be replicated as such at the input terminal end 24 of the voltage divider 20, while a voltage at or above the voltage value of 56.5 VDC would be limited to a value of 56.5 VDC at node 24. With the battery voltage at node 24 being limited, it necessarily follows that the voltage at node 21 which is coupled to the non-inverting input 11 of tip/ring amplifier 10 will be regulated.

The same is true of the embodiments shown in Figures 3 and 4 where the voltage regulator is coupled to the node 21. Here the voltage at the node 21 is directly regulated even though the battery voltage may vary.

In contrast therewith, the patent to Takato et al 4631366 discloses no voltage regulation of any sort. In the sentence bridging pages 2 and 3 of the outstanding Office Action, it has been alleged that element IV of Figure 6 of the patent to Takato et al is a voltage regulator. The top of page 3 of the Office Action further makes reference to Column 5, Lines 64-67 of the patent to Takato et al for support for the assertion that Takato et al provides a regulated voltage. What Lines 64-67 of Column 5 of Takato et al state is that the intermediate voltage can be stabilized at a level close to $-V_{BB}/2$ by the reduced impedances mentioned above. The intermediate voltage is a voltage between lines A and B. The voltage at point M2 or any place along the

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circuit path between $-V_{BB}/2$ and ground depends upon the battery voltage ($-V_{BB}$). There is nothing that regulates the voltage in terms of standard phrase voltage regulation, as used in its ordinary sense in the art and as now more specifically delineated in the amendment to Claim 15. The currents that flow in the circuit of Figure 6 of Takato et al depend upon the battery voltage. The battery voltage can be expected to vary and, consequently, currents that depend upon the battery voltage will also vary.

Applicants' invention, on the other hand, regulates the voltage at the first polarity input of the tip/ring amplifier so that the magnitudes of the first and second currents supplied by the first and second current sources, respectively, are based upon the regulated voltage value V_{reg} , irrespective of the DC voltage input exceeding the regulated voltage V_{reg} . This is in contradistinction to what occurs in the circuit of Takato et al, which performs no voltage regulation of any kind. The stabilized voltage to which the patentees make reference is the battery voltage. But the battery voltage can be expected to change, so that the stabilized voltage will also change with the battery voltage.

There is no regulation as specified in applicants' claims, as pointed out above.

It is believed that the foregoing amendment to Claim 15, to more particularly define inherent characteristics of the voltage regulator which performs the functionality of the invention, and which is not taught or suggested by the patent to Takato et al, places the application in condition for allowance.

Entry of the foregoing amendment, accordingly, and a Notice

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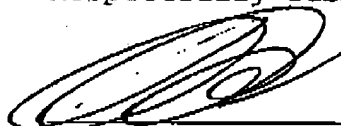
of Allowability of Claims 15-20 are respectfully requested.

On the other hand, if the Examiner is of the opinion that any additional minor amendments are in order, he is respectfully requested to contact the undersigned attorney at the telephone number listed below that such amendments may be considered for the purpose of expediting prosecution of the application.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 01-0484 and please credit any excess fees to such deposit account.

Respectfully submitted,



CHARLES E. WANDS
Reg. No. 25,649

Telephone: (321) 725-4760

Customer Number 27975

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence has been transmitted by EMAIL addressed to: walter.briney@uspto.gov, and has been forwarded via FACSIMILE number 703-872-9306 to the COMMISSIONER FOR PATENTS, this 26 day of October 2004.

Dove